

### REMARKS/ARGUMENTS

Claims 1-26 are pending in the application. Claims 14-26 are amended. The amendments to the claims as indicated herein do not add any new matter to this application.

#### CLAIM REJECTIONS—35 U.S.C. § 101

Claims 14-26 were rejected under 35 U.S.C. § 101. Each of Claims 14-26 has been amended to recite “volatile or non-volatile computer-readable medium” as recommended by the Office Action on page 10. Withdrawal of the rejections under 35 U.S.C. § 101 is respectfully requested.

#### CLAIM REJECTIONS—35 U.S.C. § 102

Claims 1-26 were rejected under 35 U.S.C. § 102(b) as being anticipated, allegedly, by U.S. Patent No. 6,085,198 (“Skinner”). This rejection is respectfully traversed.

#### *Claim 1*

Among other features, Claim 1 recites, “determining one or more second values **that correspond to one or more hidden columns of one or more tables in said database.**” Skinner does not disclose, teach, or suggest anything about “hidden columns” of a database table. The portion of Skinner that refers to database table creation begins at col. 37, line 9, and ends at col. 39, line 6. The notion of “hidden columns” is not found anywhere in this text.

The Office Action relies on col. 20, lines 24-27 of Skinner as allegedly disclosing “hidden columns of a database table.” This portion of Skinner actually refers to “private” and

“protected” states of **class elements**. Reasons why a value of a “private class element” does not necessarily need to correspond to a “hidden column of a database table” were presented in the reply to the previous Office Action.

The rejection of Claim 1 appears to be based on a misunderstanding of what the definition of a “private” or “protected” class element is. A definition of these terms in the object-oriented programming language context is given, for example, in *Essentials of the Java Programming Language: A Hands-On Guide, Part 2*, which can be viewed on-line at “[java.sun.com/developer/onlineTraining/Programming/BasicJava2/oo.html#access](http://java.sun.com/developer/onlineTraining/Programming/BasicJava2/oo.html#access)”. The fact that *Essentials* is made available by the same entity to which Skinner is assigned (Sun Microsystems, Inc.) should give *Essentials* some measure of credibility.

In the subsection titled “Fields and Methods,” *Essentials* says:

Fields and methods can be declared **private**, **protected**, public, or package. If no access level is specified, the field or method access level is package by default.  
... **private: A private field or method is accessible only to the class in which it is defined.** ... **protected: A protected field or method is accessible to the class itself, its subclasses, and classes in the same package.** ... public: A public field or method is accessible to any class of any parentage in any package. ...  
package: A package field or method is accessible to other classes in the same package.

Therefore, although the “private” or “protected” declaration of a class element influences which **other classes** can access (i.e., inherit) that class element, the “private” or “protected” declaration has absolutely no bearing on whether the values of that element are visible to any **user**. Since the “private” declaration of a class element has absolutely no bearing on whether the values of that class element are visible to **users**, there is no reason for a “private” class element to correspond to a hidden column of a database table or for the values of such a class element to be stored in such a hidden column.

Indeed, when an object is instantiated from a class that declares one of its elements to be “private,” the value of the private element of that object is as visible to users as the values of elements that have been declared to be “public.” A class element’s values are not hidden from users even if that class element has been declared to be “private.”

With an accepted understanding of the meaning of the terms “private” and “protected” as used in Skinner, it should be clear why the “private” or “protected” nature of a class element has nothing to do with hidden columns of database tables. Skinner does not disclose, teach, or suggest “determining one or more second values **that correspond to one or more hidden columns of one or more tables in said database**” as recited in Claim 1. Therefore, Claim 1 is patentable over Skinner under 35 U.S.C. § 102(b).

#### *Claim 12*

Among other features, Claim 12 recites, “a client application receiving data that conforms to a first type definition that indicates two or more first attributes, wherein at least one of said two or more first attributes is of a type that is defined by a second type definition that indicates two or more second attributes.” In other words, Claim 1 requires that at least one of the attributes of the type to which the data conforms must itself be of a type that comprises multiple attributes. The Office Action alleges that Skinner discloses this feature in col. 16, lines 48-49, which read, “In step 400, the schema describing the data classes to be used in the system is obtained.” The cited text does not indicate that the data classes have the specific qualities of the data recited in Claim 12.

The Office Action responds by saying that Skinner discloses multiple inheritance. However, Claim 12 does not say “inheritance.” Instead, Claim 12 refers to two separate type

definitions. Significantly, **one of the attributes** of the first type definition must be of a type that is defined by the **second type definition**. Also significantly, the second type definition **must** indicate **two or more attributes**. So, Claim 12 cannot be anticipated by Skinner under 35 U.S.C. § 102(b) if Skinner does not disclose, at least, a type that has two or more attributes, at least one of which attributes must be of a type that also has two or more attributes. Regardless of whether Skinner discloses multiple inheritance, the disclosure of multiple inheritance does not imply the disclosure of type definitions having the qualities recited in Claim 12. One may define a class that inherits from multiple classes **without** ever defining type definitions of the kind recited in Claim 12.

For at least the above reasons, the Applicants respectfully submit that Claim 12 is patentable over Skinner under 35 U.S.C. § 102(b).

#### *Dependent Claims*

By virtue of their dependence upon at least one of Claim 1 and Claim 12, the remaining dependent claims inherit those features of Claim 1 or Claim 12 that have been distinguished from Skinner above. Therefore, the remaining dependent claims are also patentable over Skinner under 35 U.S.C. § 102(b) for at least the reasons discussed above in connection with Claim 1 or Claim 12.

#### CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

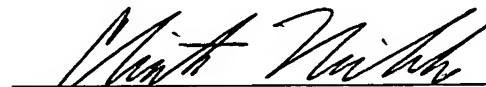
The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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